

IN THE CLAIMS:

Please **AMEND** claims 7-8 and 11-12 as follows.

1. (Previously Presented) A method, comprising:

constructing layered channel symbols as linear combinations of complex modulation symbols;

transmitting the layered channel symbols via at least two transmit paths;

using, when constructing the layered channel symbols, at least a first non-zero coefficient and a second non-zero coefficient in at least one layer when performing a linear combination, wherein a ratio of the first coefficient and the second coefficient is not a real number;

using, for at least one modulation symbol, a first non-zero total power for transmission on a first transmit path of the at least two transmit paths, and a second non-zero total power for transmission on a second transmit path of the at least two transmit paths; and

using, for at least another modulation symbol, the first non-zero total power for transmission on the second transmit path of the at least two transmit paths, and the second non-zero total power for transmission on the first transmit path of the at least two transmit paths,

wherein the first and second non-zero total powers are not equal.

2. (Previously Presented) A method of claim 1, further comprising:
using at least one complex precoder matrix comprising at least two non-zero elements comprising different transmission powers.

3. (Previously Presented) A method of claim 1, further comprising:
using at least one real precoder matrix,
wherein a transmission power ratio between the layered channel symbols transmitted at different times within a layer is at least $2/8$.

4. (Previously Presented) A method of claim 1, further comprising:
transmitting the layered channel symbols via the at least two transmit paths at different times,
wherein the layered channel symbols transmitted using different transmit paths and different times form equidistant quadrature amplitude modulation constellations.

5. (Previously Presented) A method of claim 1, further comprising:
transmitting the layered channel symbols via the at least two transmit paths at different times,
wherein the layered channel symbols transmitted using different transmit paths and different times form a lattice.

6. (Previously Presented) A method of claim 5, wherein the lattice is equidistant.

7. (Currently Amended) An apparatus, comprising:

~~antenna~~ means for producing two transmit paths for transmission of a signal;

means for modulating the signal to be transmitted into complex modulation symbols; and

means for constructing layered channel symbols as linear combinations of the complex modulation symbols, $[[;]]$ wherein the means for constructing the layered channel symbols comprises means for constructing the layered channel symbols by using at least a first non-zero coefficient and a second non-zero coefficient in at least one layer when performing the linear combinations, wherein the ratio of the first and second non-zero coefficients is not a real number; and

means for transmitting the layered channel symbols by using, for at least one modulation symbol, a first non-zero total power for transmission on a first transmit path, and a second non-zero total power for transmission on a second transmit path, and for at least another modulation symbol, the first non-zero total power for transmission on the second transmit path, and the second non-zero total power for transmission on the first transmit path,

wherein the first and second non-zero total powers are not equal.

8. (Currently Amended) An apparatus, comprising:

~~an antenna~~ a transmitter configured to produce two transmit paths for transmission of a signal;

a first modulator configured to modulate the signal to be transmitted into complex modulation symbols; and

a second modulator configured to construct layered channel symbols as linear combinations of the complex modulation symbols,

wherein the second modulator is further configured to construct the layered channel symbols by using at least a first non-zero coefficient and a second non-zero coefficient in at least one layer when performing the linear combination, wherein the ratio of the first and second non-zero coefficients is not a real number; and

wherein the second modulator and the ~~antenna~~ transmitter are further configured to transmit the layered channel symbols by using, for at least one modulation symbol, a first non-zero total power for transmission on a first transmit path, and a second non-zero total power for transmission on a second transmit path, and for at least another modulation symbol, the first non-zero total power for transmission on the second transmit path, and the second non-zero total power for transmission on the first transmit path,

wherein the first and second non-zero total powers are not equal.

9. (Previously Presented) The apparatus of claim 7, wherein the means for transmitting comprises means for transmitting the layered channel symbols by using at

least one complex precoder matrix comprising at least two non-zero elements comprising different transmission powers.

10. (Previously Presented) The apparatus of claim 7, wherein the means for transmitting comprises means for transmitting the layered channel symbols by using at least one real precoder matrix, and wherein a transmission power ratio between the layered channel symbols transmitted at different times within a layer is at least 2/8.

11. (Currently Amended) An apparatus, comprising:

~~an antenna~~ a transmitter configured to produce two transmit paths for transmission of a signal;

a first modulator configured to modulate the signal to be transmitted into complex modulation symbols; and

a second modulator configured to construct layered channel symbols as linear combinations of the complex modulation symbols,

wherein the second modulator is further configured to construct the layered channel symbols by using at least a first non-zero coefficient and a second non-zero coefficient in at least one layer when performing the linear combinations, wherein the ratio of the first and second non-zero coefficients is not a real number, and

wherein the second modulator and the ~~antenna~~ transmitter are further configured to transmit the layered channel symbols by using, for at least one modulation symbol, a

first non-zero total power for transmission on a first transmit path, and a second non-zero total power for transmission on a second transmit path, and for at least another modulation symbol, the first non-zero total power for transmission on the second transmit path, and the second non-zero total power for transmission on the first transmit path,

wherein the first and second non-zero total powers are not equal.

12. (Currently Amended) A system, comprising:

~~an antenna~~ a transmitter configured to produce two transmit paths for transmission of a signal;

a first modulator configured to modulate the signal to be transmitted into complex modulation symbols; and

a second modulator configured to construct layered channel symbols as linear combinations of the complex modulation symbols,

wherein the second modulator is further configured to construct the layered channel symbols by using at least a first non-zero coefficient and a second non-zero coefficient in at least one layer when performing the linear combination, wherein the ratio of the first and second non-zero coefficients is not a real number, and

wherein the second modulator and the ~~antenna~~ transmitter are further configured to transmit the layered channel symbols by using, for at least one modulation symbol, a first non-zero total power for transmission on a first transmit path, and a second non-zero total power for transmission on a second transmit path, and for at least another

modulation symbol, the first non-zero total power for transmission on the second transmit path, and the second non-zero total power for transmission on the first transmit path, wherein the first and second non-zero total powers are not equal.

13. (Previously Presented) The apparatus of claim 8, wherein the transmitter is further configured to transmit the layered channel symbols by using at least one complex precoder matrix comprising at least two non-zero elements comprising different transmission powers.

14. (Previously Presented) The apparatus of claim 8, wherein the transmitter is further configured to transmit the layered channel symbols by using at least one real precoder matrix, and wherein a transmission power ratio between layered channel symbols transmitted at different times within a layer is at least $2/8$.

15. (Cancelled)